

start when variable firing rates are used.

(c) *Water level controls and low water cutoff controls.* Water level controls must be constructed and located to minimize the effects of vessel roll and pitch. Float chamber low water cutoff controls using stuffing boxes to transmit the motion of the float from the chamber to the external switches are prohibited. No outlet connection other than pressure controls, water columns, drains, and steam gages may be installed on the float chamber or on the pipes connecting the float chamber to the boiler. The water inlet valve must not feed water into the boiler through the float chamber. The boiler feed piping must comply with the applicable requirements of § 56.50-30 of this chapter.

Subpart 63.25—Requirements for Specific Types of Automatic Auxiliary Boilers

§ 63.25-1 Small automatic auxiliary boilers.

Small automatic auxiliary boilers, defined as having a heat input rating of 400,000 Btu/hr. and less (117 kilowatts and less) (3 gph and less), must meet the following additional requirements.

(a) Small automatic auxiliary boilers must be equipped with a visual indicator which indicates when the low water cutoff has activated.

(b) A prepurge period of a sufficient duration to ensure at least four changes of air in the combustion chamber and stack, but not less than 15 seconds must be provided. Ignition must occur only before or simultaneously with the opening of the fuel oil valve.

§ 63.25-3 Electric hot water supply boilers.

(a) Electric hot water supply boilers which have a capacity not greater than 454 liters (120 U.S. gallons), a heat input rate not greater than 200,000 Btu/hr. (58.6 kilowatts), meet the requirements of ANSI/UL 174 or ANSI/UL 1453, and are protected by the relief device(s) required in § 53.05-2 of this chapter do not have to meet any other requirements of this section except the periodic testing required by paragraph (j) of this section. Electric hot water

supply boilers which meet the requirements of UL 174 may have temperature-pressure relief valves that meet the requirements of ANSI/AGA Z21.22 in lieu of subpart 53.05 of this chapter.

(b) Each hot water supply boiler must be constructed in accordance with the applicable requirements of part 52 or part 53 of this chapter.

(c) Branch circuit conductors for hot water supply boilers which have a capacity not greater than 454 liters (120 U.S. gallons) must have a current carrying capacity of not less than 125 percent of the current rating of the appliance. Branch circuit conductors for hot water supply boilers with capacities of more than 454 liters (120 U.S. gallons) must have a current carrying capacity of not less than 100 percent of the current rating of the appliance. Wiring materials and methods must comply with part 111, subpart 111.60 of this chapter. A hot water supply boiler having a current rating of more than 48 amperes and employing resistance type heating elements must have the heating elements on subdivided circuits. Each subdivided load, except for an electric hot water supply boiler employing a resistance type immersion electric heating element, must not exceed 48 amperes, and it must be protected at not more than 60 amperes. An electric hot water supply boiler employing a resistance type immersion electric heating element may be subdivided into circuits not exceeding 120 amperes and protected at not more than 150 amperes. Overcurrent protection devices must comply with part 111, subpart 111.50 of this chapter.

(d) Heating elements must be insulated electrically from the water being heated, guarded against mechanical injury and contact with outside objects, and securely supported. Consideration must be given to sagging, opening, and other adverse conditions of the elements resulting from continuous heating, and flexion of supports and wiring due to alternate heating and cooling. Wrap-around elements must be secured in a manner which prevents loosening.

(e) Iron and steel parts must be protected against corrosion by enameling, galvanizing, or plating. Iron and steel storage tanks having a wall thickness less than 6.4mm (¼-inch) must have